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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,887	10/03/2000	Frederic Amiche	RN98026	5298

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EXAMINER	
PIERCE, JEREMY R	
ART UNIT	PAPER NUMBER
1771	10

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A 5-10

Office Action Summary	Application No.	Applicant(s)	
	09/601,887	AMICHE ET AL.	
	Examin r	Art Unit	
	Jeremy R. Pierce	1771	

-- Th MAILING DATE of this communication appears on th cover sh et with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *37-41,43,47-57 and 63-66* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *37-41,43,47-57 and 63-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. Amendment B has been filed on May 22, 2003 as Paper No. 9. Claims 37 and 43 have been amended. Claims 42, 44-46, 58-62, and 67-74 have been cancelled. Claims 37-41, 43, 47-57, and 63-66 are currently pending.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 37, 38, 40, 41, 47, 64, and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by Awane et al. (English Translation to Japanese Application 61-7374).

Awane et al. disclose rubber material that is reinforced with mineral filler and inorganic short fibers (page 5, lines 7-19). The length of the fiber is between 10 microns and 3 mm. The ratio of length to diameter of the fiber is between 10 and 500. With regard to claims 64 and 65, the filler is present in 20 parts by weight of the rubber, and the fibers are present in an amount of 1 to 40 parts by weight of the rubber. Therefore, there can be as little as 5 parts by weight of fibers to every 100 parts by weight of filler.

Claim Rejections - 35 USC § 103

4. Claims 37-41, 47-50, 56, 57, and 63-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaliski (U.S. Patent No. 5,312,484) in view of Kaliski (U.S. Patent No. 5,240,561).

The '484 patent discloses cellulosic microfibrils used in combination with various particulate material (column 14, lines 3-20). The '484 patent does not disclose the diameter of the microfibrils, but does disclose them to be manufactured by the same process described in the '561 patent (column 38, lines 44-46). The '561 patent teaches the cellulosic microfibrils to have a length ranging from 10 to 200 microns with a length to diameter ratio is 10 to 1000 times higher than that of fiber fines (column 33, line 68 – column 34, line 12). Since the '484 patent describe the microfibrils to have a length of 1 to 10 microns, it would have been obvious to person having ordinary skill in the art, if not already inherent, to provide cellulosic microfibrils with a diameter less than 0.5 microns and with a diameter between 0.5 and 10 nm, since the '561 patent teaches the desirability of a high ratio of length to diameter of the cellulosic microfibrils. With regard to claims 56 and 57, one of the mineral particles is titanium dioxide (column 13, lines 61-62). With regard to claim 63, and absorbent particle material is present with a surface area larger than 100 m^2/g (column 14, lines 5-7). With regard to claims 64 and 65, the microfibrils are present in an amount of 0.1 to 2% by weight, and the mineral particles can be present from 0.5 to 95% by weight (column 14, lines 3-4). With regard to claim 66, the composite is created in a slurry and then dried (column 27, lines 38-52).

5. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaliski et al. in view of Kaliski et al. as set forth in section 4 above and further in view of Myers (U.S. Patent No. 4,617,353).

Kaliski et al. do not disclose coating the fibers with polypyrrole. Myers teaches adding polypyrrole to paper products in order to make them conductive (column 2, lines 3-23). It would have been obvious to one having ordinary skill in the art to add polypyrrole to the microfibrils of the Kaliski et al. patents in order to create paper that is conductive and less prone to static.

6. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaliski et al. in view of Kaliski et al. as set forth in section 4 above and further in view of Chen et al. (U.S. Patent No. 5,817,381).

Kaliski et al. do not disclose the degree of crystallinity of the cellulose microfibrils. Chen et al. disclose cellulosic microfibrils used in paper making process (column 2, lines 12-31). Chen et al. teach the important features of crystallinity of cellulose are that crystalline areas absorb water poorly and high crystalline areas result in increased elasticity and strength (column 14, lines 8-11). It would have been obvious to one having ordinary skill in the art to create the paper products of the combination of the Kaliski et al. references with a degree of crystallinity of less than 50% in order to make the paper products more absorbent rather than strong, as taught by Chen et al.

7. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaliski et al. in view of Kaliski et al. as set forth in section 4 above and further in view of Dinand et al. (U.S. Patent No. 5,964,983).

Kaliski et al. do not disclose using cellulose with 80% primary walls. Dinand et al. teach microfibrillated cellulose containing 80% primary walls (Abstract). Dinand et al. disclose the high primary wall content enables easier dissociation of the microfibrils (column 2, lines 25-36). Dinand et al. teach the microfibrils are useful in paper products (column 1, line 18). It would have been obvious to one having ordinary skill in the art to use cellulose with 80% primary wall in the combination of the Kaliski et al. references in order to use microfibrils that more easily dissociate, as taught by Dinand et al.

8. Claims 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaliski et al. in view of Kaliski et al. as set forth in section 4 above and further in view of Herrick (U.S. Patent No. 4,481,076).

Kaliski et al. do not disclose surface charging the cellulosic fibers. Herrick teaches using sugar acid and saccharic acid with microfibrillated cellulose in order to prevent the fibers from bonding to each other (column 2, lines 53-55). It would have been obvious to one having ordinary skill in the art to use acidic polysaccharides in the cellulosic microfibrils taught by the combination of the Kaliski et al. references in order to create cellulosic microfibrils that do not bond to one another. With regard to claims 54 and 55, Herrick discloses using polysaccharides, carboxylated cellulose, and disaccharides of sucrose, which would be an oside oligomer (column 2, lines 25-65).

Response to Arguments

9. Applicant's arguments filed in Paper No. 9 have been fully considered but they are not persuasive.

10. Applicant argues that Awane do not teach microfibrils having a mean diameter less than 0.8 microns and a mean length less than 30 microns. Applicant supports this argument by stating that Awane does not give a clue on the diameter of the fibers although it is possible to calculate a minimum diameter when the minimum length is 10 microns and the ratio length/diameter is 10, which comes to a minimum diameter of 1 micron. However, Awane teach the length/diameter can range from 10 to 500 (page 5, lines 16-17). Applicant's calculation is moot because Awane also disclose a length/diameter ratio of up to 500, which would make the minimum diameter of the fiber much smaller than the claimed ceiling of 0.8 microns.

11. Applicant makes the allegation that Awane fail to describe or suggest a combination in dry form, comprising microfibrils and mineral particles. However, Awane specifically states the rubber is made with a combination of mineral particles and microfibrils as pointed out in the rejection (page 5, lines 7-19).

12. Applicant argues that Awane teach frictional performance is better in a rubber without reinforcing fillers. However, Awane still teaches the reinforcing fillers to be present, and there is nothing in the Applicant's claims to distinguish them from the reference.

13. Applicant argues that the microfibrils used by Kaliski in the '484 patent cannot be obtained by the process described by Kaliski in the '561 patent because the microfibrils are different and the two patents cannot be combined. However, Applicant's reasoning is not persuasive. Kaliski, in the '484 patent, specifically states that the microfibrils are made from the process disclosed in the '561 patent (column 38, lines 44-45).

Additionally, the process described in the '484 patent (column 34, lines 14-38) is the same as the process described in the '561 patent (column 38, line 47 –column 39, line 2). The '484 patent sets forth the structure of the fiber to have a length of between 1 and 10 microns. But it does not specifically state a diameter of the fiber. The '561 patent is used to show that fibers made from the same process have an aspect ratio between 10 and 1000. The conclusion is that the fibers from the '484 patent also have an aspect ratio of 10 to 1000. Thus, the fibers of the '484 patent meet the claimed limitations.

14. Applicant makes the allegation that the two Kaliski references fail to describe or suggest a combination in dry form, comprising microfibrils and mineral particles. However, the '484 patent specifically states both mineral particles and microfibrils present in combination as set forth in the rejection (column 14, lines 3-20).

15. Applicant argues that the Kaliski references cannot be combined with Myers because Myers is mute on applying his process on cellulose fibers. However, Myers teaches that is well known in the art to coat paper products with polypyrrole to produce conductive paper (column 2, lines 12-23). Kaliski is also directed to paper products. A person having skill in the art would be able to combine the teaching that polypyrrole makes paper conductive into the reference of Kaliski.

16. Applicant argues that the instant application is not paper, but a combination in dry form of microfibrils and mineral particles. However, such a claimed combination does not preclude other ingredients, which together with the microfibrils and mineral particles, form paper.

17. Applicant argues that the combination of Chen with the Kaliski patents fails to teach the claimed microfibrils. However, as set forth above, the Kaliski patents are used alone to show the claimed features of the microfibrils.

18. Applicant argues that the combination of Dinand with the Kaliski patents fails to teach the claimed microfibrils. However, as set forth above, the Kaliski patents are used alone to show the claimed features of the microfibrils.

19. Applicant argues that the combination of Herrick with the Kaliski patents fails to teach the claimed microfibrils. However, as set forth above, the Kaliski patents are used alone to show the claimed features of the microfibrils.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jeremy R. Pierce
Examiner
Art Unit 1771

July 10, 2003

ELIZABETH M. COLE
PRIMARY EXAMINER